

Work Order ID 158075

Thursday, March 09, 2017 11:50:23 AM

158075

Page 1

Item ID: D3391-015 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Aft Tube Assembly
Start Date: 3/13/2017 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 3/23/2017 Req'd Qty: 1.00 ***1*** Customer:
Reference: SCHEDULED

Approvals: Process Plan: DAS 21 9-89 Date: MAR 09 2017 Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D3391	J

100	MORI SEIKI CNC LATHE LARGE	0.08				<u>1</u>	<u>Ø</u>		<u>DAS 23 9-89</u>
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100

Mori Seiki

Memo

0.34

Mori Seiki CNC Lathe Large

Turn as per Folio FA599 Rev: 11 & Dwg D3391 Rev: 5

****REMOVE STEADY REST AND MACHINIG MARKS****

17/3/14

110	QC2- Inspect parts off machine FAI/FAIB	0.00				<u>1</u>	<u>Ø</u>		<u>DAS 23 9-89</u>
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110

QC

Memo

0.00

Quality Control

120	HAAS CNC VERTICAL MACHINING #1	0.05				<u>1</u>	<u>Ø</u>		<u>DAS 33 9-89</u>
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120

HAAS 1

Memo

0.33

HAAS CNC vertical machine #1

1-Machine as per Folio FA 599 Rev: 11 & Dwg D3391 Rev: 1

2-Deburr

17/03/20

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐ Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐		FAULT CATEGORY Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	QC2- Inspect parts off machine FAI/FAIB	0.00				1	0		DAS 33 9-89 17/03/20
130									
QC	Memo	0.00							
Quality Control									
140	QC8- Inspect parts - second check	0.00				1	0		DAS 44 9-89 17-03-21
140									
QC	Memo	0.00							
Quality Control									
150	Skidtubes	0.00							
150									
Skidtubes	Memo	0.04							
Skidtubes	1-Drill (PILOT HOLE) aft cap holes per Dwg D3391 using DT8803 **Hole bend tangent as per Folio-11**								

DAS
10
9-89
ADD

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval 	
Description Work Order Deviation				Disposition					
2AG 3A 3B-P									
								Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	

Root Cause				FAULT CATEGORY							
Environment	☐		No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong
Design	☐		Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions
Doc/Data	☐		Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance
Equip/Tooling	☐		Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect
Handling/Pre	☐		Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing
Material	☐		Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved
Internal Transport	☐		Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing
Tribal Knowledge	☐		Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish
LOA	☐		Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread
Substation	☐		Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence
Past Expiry Date	☐		Manufacturing Process								
Misidentified	☐		Past Due	OTHER :							

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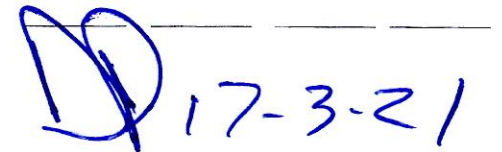
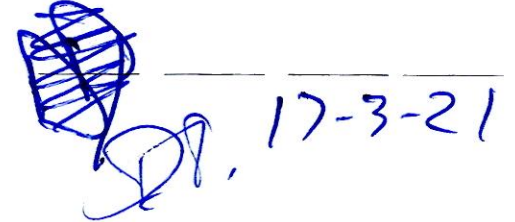
Page 3

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160	BENDING MACHINE - SKIDTUBES	0.00							
160									
CNC Bend 1	Memo	0.12							
CNC Delta 100 Bender	Form as per Dwg D3391 **Folio -11**								
170	QC5- Inspect part completeness to step on W/O	0.00							
170									
QC	Memo	0.00							
Quality Control									

H-4.15"



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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
Environment ☐	☐	No Re-verification ☐	Pressure/Forced ☐	☐	Temperature/Cure ☐	☐	Power Loss/Surge ☐
Design ☐	☐	Operator ☐	Bending ☐	☐	Set-up ☐	☐	Folio/Program ☐
Doc/Data ☐	☐	Offset/Setup ☐	Centre Not Concentric ☐	☐	BOM/Route ☐	☐	Grain ☐
Equip/Tooling ☐	☐	Supplier ☐	Cracks ☐	☐	Broken/Damage/Defect ☐	☐	Weld ☐
Handling/Pre ☐	☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	☐	Inspection Incomplete/Unqualified ☐	☐	Wrong Stock Pulled ☐
Material ☐	☐	Use for Testing ☐	Cuffs ☐	☐	Contamination ☐	☐	Out of Sequence ☐
Internal Transport ☐	☐	Poor Information ☐	Crushing ☐	☐	Countersink ☐	☐	Off-set ☐
Tribal Knowledge ☐	☐	Rushing ☐	Heat Treat ☐	☐	Cut Too Short ☐	☐	Mislabeled ☐
LOA ☐	☐	Product Improvement ☐	Wave/Twist in Tube ☐	☐	Instructions Incomplete/Unclear ☐	☐	Fit/Function ☐
Substation ☐	☐	Process Improvement ☐	Marks/Chatter ☐	☐	Drill Holes ☐	☐	Misaligned/off center ☐
Past Expiry Date ☐	☐	Manufacturing Process ☐	OTHER :				
Misidentified ☐	☐	Past Due ☐					

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Required Date: 3/23/2017 Req'd Qty: 1.00 ***1*** Customer:
Reference: SCHEDULED

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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180

0.00

180

Skidtubes

Skidtubes

Skidtubes

Memo

0.32

1-Open Aft cap pilot hole to .208" as per Dwg D3391

2-Drill float bag holes using DT8809 as per Dwg D3391(All holes)

3-Drill wearplate holes as per Dwg D3391 using DT8878(Mid Tube) & DT8217
Wearplate Jig .

*****Do Not Open To Finished Size*****

4-Drill Wearshoe holes as per DWG D3391 using DT8939 locating from 2
previously drilled aft wearplate holes.5- Tranfer holes from D3391-013 for electric step 0.187" hole D3391 section cc-
cc6- Using DT10247 and drill holes for nutplates, Detail DD, open (5) forward
wearplate holes 0.375", and c'sink.7-Open wearplate holes to 0.297" and c'bore as per dwg D3391. ***SIX
FARTHEST AFT HOLES ONLY***

8-C'bore section cc-cc and open to finish size

9-Open up all wearshoe , wearplate to 0.297" open float bag holes to 0.328" as
per Dwg D3391, and c'bore

10-Deburr

Mid B# 158074

17-3-22

DQA: _____ Date: _____



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Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

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Required Date: 3/23/2017 Req'd Qty: 1.00 ***1*** Customer:
Reference: SCHEDULED

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190	QC5- Inspect part completeness to step on W/O	0.00							
190									
QC	Memo	0.00							
Quality Control									
200	Chemical Conversion Coat per QSI005 4.1	0.00							
200									
HandFinish	Memo	0.18							
Hand Finishing									
205	QC7-Inspect Chemical Conversion Coat	0.00							
205									
QC	Memo	0.00							
Quality Control									

① 17.03.22 10.

① 2017/03/22
BEB

DAS 03 9-22 17-3-22

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
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Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
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Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
210	Skidtubes	0.03							
210 Skidtubes	Memo 1- Instal spacers as per dwg D3391 A/R Magnabond 6398 Batch: B4167 exp. date : 12-6-30 cure time 12hrs as per QSI0015 2- Grind crossbolts flush 3- Back drill using #9 drill 4- Touchup Magnabond 5- Deburr	0.11							
220	QC5- Inspect part completeness to step on W/O	0.00							
220 QC	Memo	0.00							
Quality Control									

B4167 **DP 17-3-22**

17.03.23
DT.

DAS
38
9-89

1

MAR 23 2017

DAS
38
9-89

MAR 23 2017

DQA: _____ Date: _____



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Run Start ***NR1***
Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
225	Pressure Wash per QSI005 4.3	0.00							
225									
HandFinish	Memo	0.20							
Hand Finishing	AND REALODINE AS PER PAR09-043								201703/23 B23
230		0.00							
230									
SprayPaint	Memo	0.00							
Spray Painting	PRIME AS PER DWG AND QSI005 4.2.1.3.3 PRIMER BATCH: <u>136772</u>								
	PAINT AS PER DWG AND QSI005 4.2.2.4 PAINT: <u>136798</u>								
240	QC14- Inspect Spray Paint	0.00							
240									
QC	Memo	0.00							
Quality Control									1x d Jd 17/03/23 DAS 15 9-89

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Date :	Step #:	QTY Effective :		MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation		Disposition			
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
		OTHER : ☐			

Work Order ID 158075

Thursday, March 09, 2017 11:50:23 AM

158075

Page 8

Item ID: D3391-015

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Aft Tube Assembly

Start Date: 3/13/2017 Start Qty: 1.00

1

Cust Item ID:

Required Date: 3/23/2017 Req'd Qty: 1.00

1

Customer:

Reference: SCHEDULED

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
250	HandFinishing	0.00							
250	HandFinish	0.13							
Hand Finishing	Memo 1- Install nutplate using MS20601AD4W4 (qty12) in the six most forward holes and MS20601AD4W9 (qty8) in the four aft holes. Rivet nutplates as per section TT on sheet 11. 2-Install inserts per dwg D3391 3-Install Aft Cap as per Dwg D3391 A/R Sikaflex-241/-291 <u>11/37/27</u> Sikaflex expiry date: <u>12/12</u> 4- INSTALL WEARPLATE AS PER DWG								
260	QC5- Inspect part completeness to step on W/O	0.00							
260	QC	0.00							
Quality Control	Memo								

DAS
38
9-88

MAR 28 2017

DAS
38
9-89

MAR 28 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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		OTHER : ☐																							

Work Order ID 158075

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158075

Page 9

Item ID: D3391-015 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Aft Tube Assembly
Start Date: 3/13/2017 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 3/23/2017 Req'd Qty: 1.00 ***1*** Customer:
Reference: SCHEDULED

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
270	Identify as per dwg & Stock Location: <u>w/c</u>	0.00							
270									
Packaging	Memo	0.00							
Packaging									
280	QC21- Final Inspection - Work Order Release	0.00							
280									
QC	Memo	0.02							
Quality Control									

DAS
21
9-89

MAR 29 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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		OTHER : ☐																							

Picklist Print

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Page 1

Work Order ID: 158075

158075

Parent Item: D3391-015

D3391-015

Parent Item Name: Aft Tube Assembly

Start Date: 3/13/2017

Required Date: 3/23/2017

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP rev A 05.12.13 New issue EC
IPP rev B 06.02.09 Dwg @ revD EC
IPP rev C 07.03.13 dwg @revF ec
IPP rev D 07.10.31 ecn 1053P EC
IPP Rev:E ECN 1056 07-11-13 DD verified by: EC
IPP Rev:F 08-09-10 revH as per dwg DD verified by:EC IPP Rev:G
11.11.14 AS PER REV.I DD verified by:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
NAS1149C0332R		Purchased	No			100	Each	3,689.000	10	10			

NAS1149C0332R

WASHER

**

all 12/03/27

Location	Loc Qty	Loc Code
FP001	600	
m126319	54	
m127831	54	
m136537	28	
m136741	46	
m136975	418	
GA	532	
m133284	32	
m136444	500	
ST260a	2200	
m135408	0	
m135766	500	
m135908	200	
m136042	500	
m136643	1000	X10
ST266	357	
m135466	357	

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																																	
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Picklist Print

Thursday, March 09, 2017 11:50:26 AM

Work Order ID: 158075

158075

Parent Item: D3391-015

D3391-015

Parent Item Name: Aft Tube Assembly

Start Date: 3/13/2017

Required Date: 3/23/2017

Start Qty: 1.00

Required Qty: 1.00

D6014-090 Manufactured No

210 Each 29.0000 1 1

D6014-090

Aluminum Extrusion

Location

Loc Qty

Loc Code

LG003

29

139426

29

250 Each 4,358.000 8 8

ALS4-1032-130 AELS4-1032-130 Purchased No

AI S4-1032-130

Rivnut

Location

Loc Qty

Loc Code

CCK007

4136

M136579

4136

FG

50

FG

M135442

50

FP001

172

M133077

72

M135442

100

250 Each 4,046.000 4 4

ALS4-1032-225 AELS8-1032-225 Purchased No

AI S4-1032-225

Rivnut

Location

Loc Qty

Loc Code

CCK007

500

M136579

500

FG

28

M134975

20

M135998

8

FP001

3518

M135603

40

M135920

38

M135998

3350

M136265

90

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ll 17/03/27

x4

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
		OTHER : ☐			

Picklist Print

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Page 3

Work Order ID: 158075

158075

Parent Item: D3391-015

D3391-015

Parent Item Name: Aft Tube Assembly

Start Date: 3/13/2017

Required Date: 3/23/2017

Start Qty: 1.00

Required Qty: 1.00

ALS4-428-165

Purchased

No

250

Each

65.0000

4

4

AI S4-428-165

INSERT

**

all 17/03/27

Location

Loc Qty

Loc Code

FG

10

117769

10

FP001

55

117769

5

m136986

50

x4

AN3C4A

Purchased

No

250

Each

567.0000

6

6

AN3C4A

Bolt

**

all 17/03/27

Location

Loc Qty

Loc Code

FG

20

122814

20

FP001

375

M136450

23

M136740

8

M136986

344

x6

ST350

172

M135704

172

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval	
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐			
Design ☐	☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐			
Doc/Data ☐	☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐			
Equip/Tooling ☐	☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐			
Handling/Pre ☐	☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐			
Material ☐	☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐			
Internal Transport ☐	☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐			
Tribal Knowledge ☐	☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐			
LOA ☐	☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐			
Substation ☐	☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐			
Past Expiry Date ☐	☐	Manufacturing Process ☐	OTHER : _____						
Misidentified ☐	☐	Past Due ☐							

Picklist Print

Thursday, March 09, 2017 11:50:27 AM

Page 4

Work Order ID: 158075

158075

Parent Item: D3391-015

D3391-015

Parent Item Name: Aft Tube Assembly

Start Date: 3/13/2017

Required Date: 3/23/2017

Start Qty: 1.00

Required Qty: 1.00

AN3C5A

Purchased

No

250

Each

780.0000

4

4

AN3C5A

Bolt

ll 17/03/27

Location

Loc Qty

Loc Code

FG

5

122800

5

FP001

204

M136648

204

OVER002

400

M136182

100

M136450

200

M136579

100

ST350

171

M134676

1

M135442

170

D2646

Manufactured

No

250

Each

12.0000

1

1

D2646

Aft Cap

ll 17/03/27

Location

Loc Qty

Loc Code

FG

4

85848

2

90495

2

FP001

8

127924

1

136885

3

149748

4

B154440

xl

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																						
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																						
Large Fab ☐	Composite ☐	Supplier ☐																							
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																		
Description Work Order Deviation				Disposition			Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval																		
Root Cause		FAULT CATEGORY																							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐		Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐		Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐		Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐																	
		OTHER : ☐																							

Picklist Print

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Page 5

Work Order ID: 158075

158075

Parent Item: D3391-015

D3391-015

Parent Item Name: Aft Tube Assembly

Start Date: 3/13/2017

Required Date: 3/23/2017

Start Qty: 1.00

Required Qty: 1.00

D3670-4-200

Manufactured No

250

Each

95.0000

14

D3670-4-200

Bushing

**

17-3-22

Location

Loc Qty

Loc Code

FG

10

87709

10

LG001

85

138819

3

154830

20

155840

62

D3672-1

Manufactured No

250

Each

724.0000

2

D3672-1

Washer, Phenolic

**

17-3-22

Location

Loc Qty

Loc Code

FG

10

85222

10

FP001

676

112218

4

134785

172

150074

500

ST049

38

147077

38

D4095-047

Manufactured No

250

Each

13.0000

1

D4095-047

Wearpad Aft

**

17-3-22

Location

Loc Qty

Loc Code

FP001

13

149261

4

154327

5

156491

4

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Shop Packet Print

Page 5

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :			MRB (QSI042) Approval
Description Work Order Deviation		Disposition			Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
		OTHER : ☐			

Picklist Print

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Page 6

Work Order ID: 158075

158075

Parent Item: D3391-015

D3391-015

Parent Item Name: Aft Tube Assembly

Start Date: 3/13/2017

Required Date: 3/23/2017

Start Qty: 1.00

Required Qty: 1.00

D4095-049

Manufactured No

250

Each

13.0000

1

1

D4095-049

Wearpad Aft

all 17/03/27

Location

Loc Qty

Loc Code

FP001

13

150415

4

154323

5

156475

4

xl

MS20601-AD4W4

Purchased

No

250

Each

560.0000

12

12

MS20601-AD4W4

Rivet

Location

Loc Qty

Loc Code

over004

200

m135470

200

ST307

360

113064

14

113749

185

m134181

11

m136150

150

(12) TW 17-03-27

MS20601-AD4W9

Purchased

No

250

Each

154.0000

8

8

MS20601-AD4W9

RIVET

Location

Loc Qty

Loc Code

Mezz

10

19191

10

ST307

144

m134215

144

137148

(8) TW 17-3-27

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : ☐					

Picklist Print

Thursday, March 09, 2017 11:50:27 AM

Page 7

Work Order ID: 158075

158075

Parent Item: D3391-015

D3391-015

Parent Item Name: Aft Tube Assembly

Start Date: 3/13/2017

Required Date: 3/23/2017

Start Qty: 1.00

Required Qty: 1.00

MS21075L5

Purchased

No

250

Each

143.0000

10

10

MS21075L5

Nut Plate

Location

Loc Qty

Loc Code

GA

80

m136988

80

LG001

10

~~m136442~~

10

ST298

53

m133498

2

m135603

1

m136987

50

10 TW 17-03-27

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Shop Packet Print

Page 7

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																						
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																						
Large Fab ☐	Composite ☐	Supplier ☐																							
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																		
Description Work Order Deviation				Disposition			Completed By																		
Root Cause				FAULT CATEGORY																					
Environment ☐		No Re-verification ☐		Pressure/Forced ☐		Temperature/Cure ☐		Power Loss/Surge ☐		Positioned Wrong ☐															
Design ☐		Operator ☐		Bending ☐		Set-up ☐		Folio/Program ☐		Outside Dimensions ☐															
Doc/Data ☐		Offset/Setup ☐		Centre Not Concentric ☐		BOM/Route ☐		Grain ☐		Over/Under tolerance ☐															
Equip/Tooling ☐		Supplier ☐		Cracks ☐		Broken/Damage/Defect ☐		Weld ☐		Part Incorrect ☐															
Handling/Pre ☐		Training ☐		Crimp/Kink/Ripple/Wave ☐		Inspection Incomplete/Unqualified ☐		Wrong Stock Pulled ☐		Part Lost/Missing ☐															
Material ☐		Use for Testing ☐		Cuffs ☐		Contamination ☐		Out of Sequence ☐		Part Moved ☐															
Internal Transport ☐		Poor Information ☐		Crushing ☐		Countersink ☐		Off-set ☐		Drawing ☐															
Tribal Knowledge ☐		Rushing ☐		Heat Treat ☐		Cut Too Short ☐		Mislabeled ☐		Finish ☐															
LOA ☐		Product Improvement ☐		Wave/Twist in Tube ☐		Instructions Incomplete/Unclear ☐		Fit/Function ☐		Misread ☐															
Substation ☐		Process Improvement ☐		Marks/Chatter ☐		Drill Holes ☐		Misaligned/off center ☐		Turning Sequence ☐															
Past Expiry Date ☐		Manufacturing Process ☐		OTHER : _____																					
Misidentified ☐		Past Due ☐																							

DART AEROSPACE LTD		Work Order: 158045
Description: Float Skidtube (412)		Part Number: D3391-3
Inspection Dwg: D3391	Rev: J	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

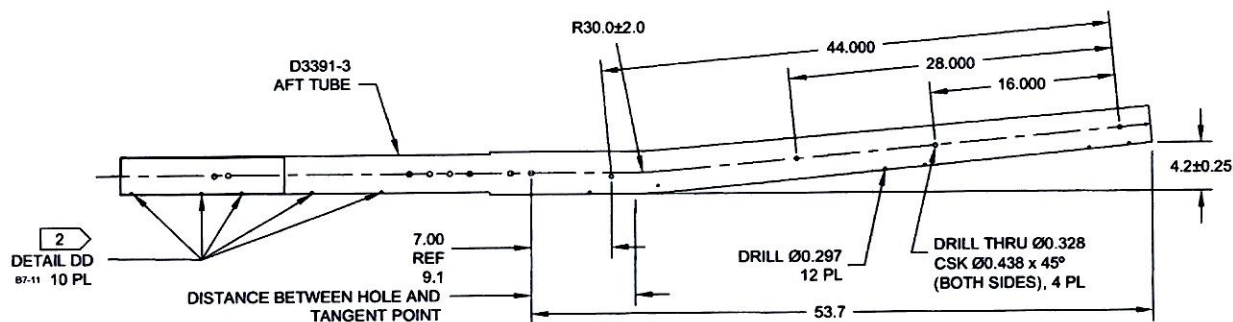
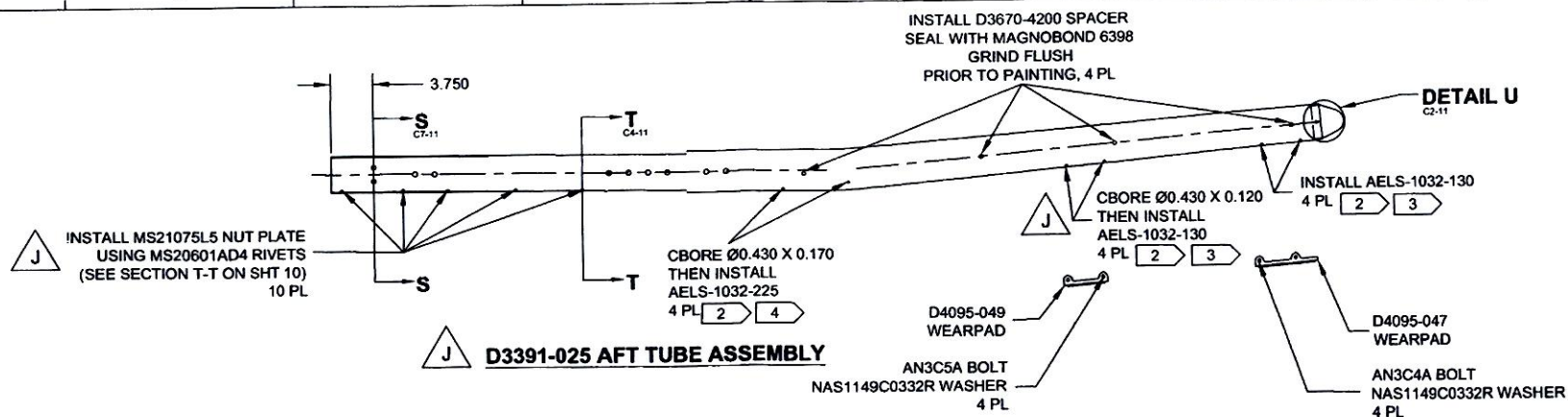
Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Lathe Section						
14.000	+/-0.010	14.000	✓		tape	
3.500	+/-0.010	3.498	✓		Vernier	
Ø3.200	+/-0.010	3.199	✓			
Ø3.750	+/-0.010	3.720	✓			
30° x 0.060 chamfer	+/-0.010	30° x 0.060	✓			
88.93	+/-0.030	88.90			tape	

Measured by: DAS 23 9-89	Date: 17/3/14
Audited by:	Date:

HAAS Section						
1.526	+0.000/-0.030	1.526	✓		MJP-04	VCRN
7.500	+/-0.010	7.496	✓			
27.750	+/-0.010	27.750	✓			
31.750	+/-0.010	31.750	✓			
35.250	+/-0.010	35.250	✓			
3.300	+/-0.010	3.298	✓			
0.200	+/-0.010	0.200	✓			
3.520	+/-0.010	3.520	✓			
0.687	+0.010/-0.000	0.688	✓			
R0.062	+/-0.010	0.062	✓			
Ø0.484	+0.005/-0.001	0.486	✓			

Measured by: DAS 33 DAS 9-89	Date: 17/03/20
Audited by: DAS 44 9-89	Date: 17-03-21

Rev	Date	Change	Revised by	Approved
A	06.04.24	New Issue P/O D3391-015/-025	KJ/JLM	
B	06.06.19	Dwg revision update	KJ/JLM	
C	07.04.20	Ø0.208 dimension removed	KJ/JLM	
D	07.09.06	0.400 dimension removed	KJ/JLM	
E	07.11.23	Dwg Rev. updated	KJ/EC/DD	
F	09.04.27	Dimensions updated per Rev H and NCR09-028	KJ/JLM	
G	09.11.16	Dimension 0.200 removed	KJ	
H	11.06.21	Dimension 44.995 removed	KJ	
I	12.05.15	Dwg Rev updated	KJ	
J	12.05.23	Dimension updated	KJ	
K	12.10.15	88.93 dimension removed	KJ	
L	12.11.28	88.93 dimension added	KJ	
M	16.06.23	Dimensions updated per Rev J	KJ	



D3391-025 AFT TUBE ASSEMBLY PARTS LIST

QTY	PART NUMBER	DESCRIPTION
X	D3391-025	AFT TUBE ASSEMBLY
1	D2648	AFT CAP
1	D3391-3	AFT TUBE
4	D3670-4200	SPACER
2	D3672-1	WASHER
1	D4095-049	WEARPAD
1	D4095-047	WEARPAD
8	AELS-1032-130	INSERT
4	AELS-1032-225	INSERT
6	AN3C4A	BOLT
4	AN3C5A	BOLT
20	MS20601AD4	RIVET, BLIND
10	MS21075L5	NUT PLATE FLOATING
10	NAS1149C0332R	WASHER

NOTES:

- 1) COAT ALL EXPOSED FASTENERS WITH LPS "LPS PROCYON"
- 2) USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL Ø0.297 AND Ø0.375 HOLES FOR WEARSHOE INSERTS AND NUTPLATES. CBORE AS NOTED AND INSTALL INSERT/NUTPLATES EXCEPT WHERE INDICATED. USE NUT PLATE DRILL JIG IF REQUIRED.
- 3) ENSURE WALL THICKNESS IS BETWEEN 0.070 AND 0.130 BEFORE INSTALLING INSERT
- 4) ENSURE WALL THICKNESS IS BETWEEN 0.130 AND 0.225 BEFORE INSTALLING INSERT

RELEASED
2016-04-28

DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	ML	EUGENE, OR	
CHECKED	CP	DRAWING NO.	REV. J
MFG. APPR.	<i>SAP</i>	D3391	SHEET 9 OF 11
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	AFT TUBE ASSEMBLY	NTS
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